

REMARKS

Claims 1-14 are in the case. Claims 1 and 8 have been amended to more clearly set forth applicants' invention.

Initially, claims 1-7 stand rejected under 35 USC 102 over Seaman, U.S. Patent Number 4,281,888. It is respectfully submitted that these claims should be allowed thereover.

Claim 1 now recites in full:

1. Apparatus for bridging a fuse of an electronic device comprising:  
a base; and  
a conductive element mounted on the base, which may be brought into contact with and bridge a fuse, so as to provide operable conductive communication between elements connected to a fuse.

The Examiner states:

Re claim 1, Seaman discloses an apparatus for bridging a fuse comprising a base 55, conductive element (60, 51, 52) that may be brought into contact with and bridge a fuse (Fig. 3)

In Seaman, however, there is no disclosure of an apparatus which may be brought into contact with and bridge of a fuse. Rather, in Seaman, leads of a fuse holder are tested for continuity with the fuses removed. With the fuses removed, the conductive elements of Seaman are brought into contact with leads internal to the fuse block 30. This points out the very fundamental difference between applicants' invention of claim 1 and the disclosure of Seaman. Applicants are interested in bridging a fuse. Indeed, applicants' device is clearly of the type where fuses cannot be removed from a "fuse holder". Thus, applicants' approach in accordance with claim 1 is completely different from Seaman. Applicants' approach is directed to bridging of fuses which are in place. On the other hand, Seaman's approach involves the type of fuse that can be removed from a fuse holder, and involves testing leads of the fuse holder for continuity with the fuse removed.

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For these reasons, claim 1 is respectfully submitted to be allowable over Seaman.

Claim 2, dependent from claim 1, is initially respectfully submitted to be allowable on the basis of this dependency. Claim 2 is also respectfully submitted to be allowable on its own merit.

Claim 2 calls for a plurality of conductive elements mounted to the base, at least some of which may be brought into contact with and bridge a fuse. The Examiner states:

Re claim 2, Seaman discloses a plurality of contact elements (60, 51, 52).

None of these "contact elements", collectively or individually, bridge a fuse. Rather, these contact elements are used collectively, not individually, for testing the continuity of leads internal to fuse block 30 with the fuses removed therefrom. Claim 2 is respectfully submitted to be allowable on this basis also.

Claim 3, dependent from claim 2, is initially respectfully submitted to be allowable on the basis of this dependency. Claim 3 is also respectfully submitted to be allowable on its own merit.

Claim 3 calls for the conductive elements to be substantially parallel and in spaced-apart relation. Again, none of these "contact elements" 60, 51, 52, collectively or individually bridge a fuse. In addition, "contact element" 60 is a contact tip, and the concept of such a tip being "parallel" to another element is inappropriate. Claim 3 is respectfully submitted to be allowable on this basis also.

Claim 4, dependent from claim 2, it initially respectfully submitted to be allowable on the basis of this dependency. Claim 4 is also respectfully submitted to be allowable on its own merit.

Claim 4 sets forth that the base is resilient compressive material. The Examiners states, in regard to claim 4-6:

Re claims 4-6, Seaman discloses insulating base 55 comprising resilient compressive material (spring 62).

In Seaman, however, the spring 62 is not part of the base 55, but is part of the "conductive elements" of Seaman. As stated in Seaman at column 5, lines 21-30:

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The plunger 59 is terminated in a serrated contact tip 60 for contacting the coiled outer end of the lead 13. The plunger 59 is reciprocally mounted in a tubular barrel 61, and a conductive biasing spring 62 in the barrel normally positions the plunger 59 in an extended forward position shown in FIG. 3. The spring 62 is electrically connected to the inner end of the plunger 59 and to the barrel 61, thus providing a continuous electrical path from the tip 60 to the outer end of the barrel 61, the left end in FIG. 3.

In addition, claim 4 recites that the base is resilient impressive material (with a plurality of conductive elements mounted on the base, in accordance with claim 2. Even if the spring 62 was to be considered part of the base 55, clearly no conductive elements are mounted on the spring 62. Claim 4 is respectfully submitted to be allowable on this basis also.

Claim 5, dependent from claim 2, is initially respectfully submitted to be allowable on the basis of this dependency. Claim 5 is also respectfully submitted to be allowable on the basis of reciting that the base is insulating material. In accordance with the Examiner's above quoted statement, the Examiner considers spring 62 to be part of the base 55. Yet the spring 62 is given as conductive (see above-quoted portion of Seaman). This is completely understandable because the spring 62 is part of a "conductive element" of Seaman and not a part of the base 55. Claim 5 is respectfully submitted to be allowable on this basis also.

Claim 6, dependent from claim 3, is initially respectfully submitted to be allowable on the basis of this dependency. Claim 6 includes all the limitations of claims 4 and 5, and thus the arguments set forth in favor of the allowability of claims 4 and 5 on their own merit apply with equal force here.

Claim 7, dependent from claim 3, is respectfully submitted to be allowable on the basis of this dependency.

Claims 1-3 and 7 stand rejected under 35 USC 102 over Fan, U.S. Patent Number 6,252,410. It is respectfully submitted that these claims should be allowed thereover.

Applicants again set forth claim 1 in full:

1. Apparatus for bridging a fuse of an electronic device comprising:  
a base; and  
a conductive element mounted on the base, which may be brought into contact with and bridge a fuse, so as to provide operable conductive communication between elements connected to a fuse.

Fan discloses a detector tool for detecting whether a pico fuse is open or shorted. As stated therein at column 2, lines 52-58:

To further simplify the testing process, when a pico fuse is open or shorted, this condition can be readily indicated by lighting an LED lamp 30 built into the detector body 12. The LED 30 may be activated by a test circuit, e.g., a typical oscillation circuit of the type shown in Fig. 3, that can be built into one of the probe arms (11) and powered by a battery V built into the other probe arm (10).

Thus, Fan does not “provide operable conductive communication between elements connected to a fuse”, as specifically called for in claim 1. Rather, the detector tool of Fan merely detects the (open or shorted) state of the fuse. This is completely different from providing operable conductive communication between elements connected to fuse. As stated in applicants’ specification, at page 4, lines 14-18:

Through bridging of blown fuses as described above, full electrical testing of the device 10 can be undertaken, because, for such testing purposes, the pins of the device 10 are no longer cut off from internal circuitry, which would be the state of the device 10 without such bridging of blown fuses. Thus, 100 percent verification of the state of all fuses downstream of the fuses L1 (for example the fuses of each BP pair) can be achieved.

Claim 1 is thus respectfully submitted to be allowable over Fan.

Again, claim 2, dependent from claim 1, is initially respectfully submitted to be allowable on the basis of this dependency. Regarding claim 2, the Examiner states that Fan discloses a plurality of contact elements 10, 11. These elements 10, 11 are described as of plastic (Fan at column 2, lines 26-27), and thus cannot be considered "a plurality of conductive elements" in accordance with claim 2. Claim 2 is thus respectfully submitted to be allowable on this basis also.

Again, claim 3, dependent from claim 2, is initially respectfully submitted to be allowable on the basis of this dependency. Regarding claim 3, the Examiner states that Fan discloses conductive elements 10, 11 that are substantially parallel and in spaced apart relation. It is respectfully submitted that these elements 10, 11 are not substantially parallel (see Figure 1), and indeed if they were positioned so as to be substantially parallel, the elements 10, 11 would pivot toward each other about their pivot point in the body 12 until they were in side-by-side relation, so that they would no longer be able to span the fuse 28. Such a state would clearly not be undertaken in Fan, as it would render the detector tool inoperable. Claim 3 is thus respectfully submitted to be allowable on this basis also.

A similar discussion applies to claim 7, dependent from claim 3. In the state shown in Figure 1 of Fan, the elements 10, 11 clearly do not "lie within the periphery of base 12", as suggested by the Examiner. Furthermore, the state of providing the elements 10, 11 in side-by-side relation as described above clearly would not be undertaken, as it would render the detector tool inoperable.

Claims 8-13 stand rejected under 35 USC 103 over Seaman in view of Rennies et al., U.S. Patent Number 6,215,323. It is respectfully submitted that these claims should be allowed thereover.

Claim 8 recites:

8. Apparatus for testing an electrical device which includes a fuse comprising:
  - a thermal head;
  - a base mounted on the thermal head; and
  - a conductive element mounted to the base, which may be brought into contact with and bridge a fuse with the thermal head adjacent an electrical device, so as to provide operable conductive communication between elements connected to a fuse.

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The Seaman disclosure is used by the Examiner in a manner set forth above, with the Examiner stating:

Re claim 8, Seaman discloses all of the claimed limitations as set forth including base 55 mounted on head 72 (assembly) (column 5 lines 47-62) (Fig. 4) except expressly disclosing thermal head. Rennies et al. discloses thermal head 302 comprising plurality of conductive elements 112 for contacting a device under test 100 (Fig. 4). At the time of the invention it would have been obvious for one of ordinary skill in the art to modify Seaman by adding thermal head disclosed by Rennies et al. for controlling the temperature of device while testing.

Initially, it is to be pointed out that even if the disclosures were combined as suggested by the Examiner, the resulting structure would not anticipate applicants' claim 8. Claim 8 includes all the limitations of claim 1. The Examiner cites Seaman against claims 1 in 8 in the same manner, and thus the arguments set forth above distinguishing claim 1 over Seaman apply with equal force here. Thus, it is submitted that no combination of Seaman and Rennies et al. would anticipate claim 8. Furthermore, the composite test unit 70 of Seaman is a complete and functional unit designed for a specific purpose.

It is applicants' understanding that

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

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Clearly no such suggestion or motivation exists in either of the cited patents.

For these reasons, claim 8 is respectfully submitted to be allowable.

Claim 9, dependent from claim 8, is initially respectfully submitted to be allowable on the basis of this dependency. Claim 9 includes limitations similar to claim 2, and the Examiner cites Seaman against claims 2 and 9 in the same manner. Thus, the arguments set forth in favor of the allowability of claim 2 apply with equal force here.

Claim 10, dependent from claim 9, is initially respectfully submitted to be allowable on the basis of this dependency. Claim 10 includes limitations similar to claim 3, and the Examiner cites Seaman against claims 3 and 10 in the same manner. Thus, the arguments set forth in favor of the allowability of claim 3 apply with equal force here.

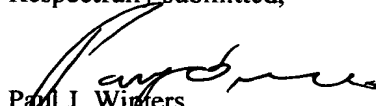
Claim 11, dependent from claim 10, is initially respectfully submitted to be allowable on the basis of this dependency. Claim 11 includes limitations similar to claim 6, and the Examiner cites Seaman against claims 6 and 11 in the same manner. Thus, the arguments set forth in favor of the allowability of claim 6 apply with equal force here.

Claim 12, dependent from claim 11, is respectfully submitted to be allowable on the basis of this dependency.

Claim 13, dependent from claim 12, is respectfully submitted to be allowable on the basis of this dependency.

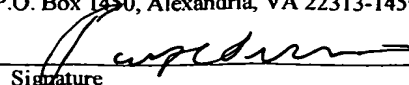
Claim 14 stands rejected under 35 USC 103 over Seamans and Rennies et al. in view of Blankenship et al., U.S. Patent Number 4,698,589. Claim 14, dependent from claim 13, is respectfully submitted to be allowable on the basis of this dependency.

Respectfully submitted,

  
Paul J. Winters  
Reg. No. 25,246  
Attorney for Applicant(s)

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Paul J. Winters  
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